Volunteer Lake Assessment Program Individual Lake Reports

WILD GOOSE POND, PITTSFIELD, NH

MORPHOMETRIC DATA

Watershed Area (Ac.):	2,313	**Max. Depth (m):**	6.8	**Flushing Rate (yr^{-1}):**	4.1
Surface Area (Ac.):	99	**Mean Depth (m):**	2.7	**P Retention Coef:**	0.54
Shore Length (m):	3,200	**Volume (m^3):**	1,277,500	**Elevation (ft):**	623

TROPHIC CLASSIFICATION

Year	Trophic class
1981	OLIGOTROPHIC
2002	MESOTROPHIC

KNOWN EXOTIC SPECIES

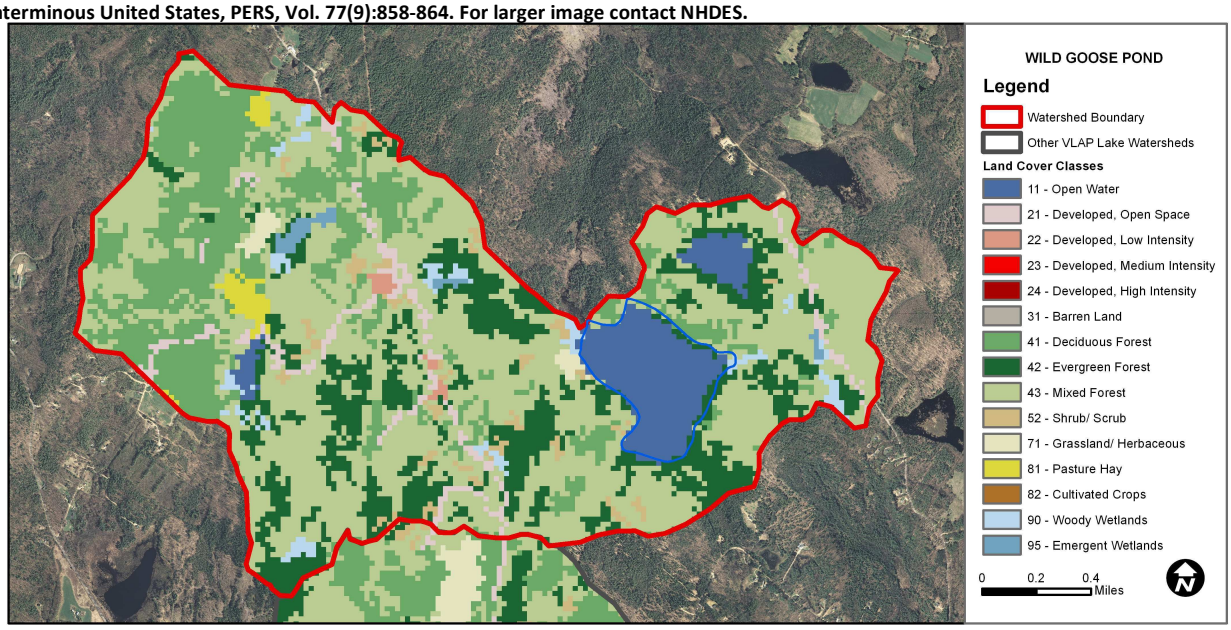
The Waterbody Report Card tables are generated from the 2012 305(b) report on the status of N.H. waters, and are based on data collected from 2001-2011.

Designated Use	Parameter	Category	Comments
Aquatic Life	Phosphorus (Total)	Likely Bad	The calculated median is fewer than 5 samples but > indicator and the chlorophyll a indicator is okay. More data needed.
	Oxygen, Dissolved	Likely Good	There are < 10 samples with 0 exceedances of criteria. More data needed.
	Dissolved oxygen satura	Likely Good	There are < 10 samples with 0 exceedances of criteria. More data needed.
	Dissolved oxygen satura	Likely Good	There are < 10 samples with 0 exceedances of criteria. More data needed.
	Chlorophyll-a	Likely Bad	The calculated median is fewer than 5 samples but > indicator. More data needed.
Primary Contact Recreation	Escherichia coli	No Data	No data for this parameter.
	Chlorophyll-a	Likely Good	There are < 10 samples with 0 exceedances of indicator. More data needed.

BEACH PRIMARY CONTACT ASSESSMENT STATUS

WATERSHED LAND USE SUMMARY

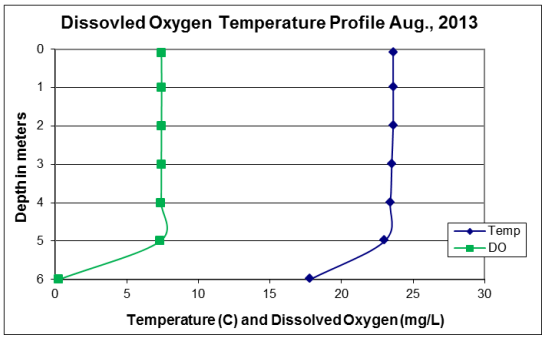
Fry, J., Xian, G., Jin, S., Dewitz, J., Homer, C., Yang, L., Barnes, C., Herold, N., and Wickham, J., 2011. Completion of the 2006 National Land Cover Database for the Conterminous United States, PERS, Vol. 77(9):858-864. For larger image contact NHDES.



VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS
WILD GOOSE POND, PITTSFIELD, NH
2013 DATA SUMMARY

OBSERVATIONS AND RECOMMENDATIONS (*Refer to Table 1 and Historical Deep Spot Data Graphics)*

- **CHLOROPHYLL-A:** Chlorophyll levels were within a low range and were less than the NH state median value.
- **CONDUCTIVITY/CHLORIDE:** Deep spot (Epilimnion & Hypolimnion) and Smith Inlet conductivity and chloride levels were within a low range and were less than the NH state median value.
- **TOTAL PHOSPHORUS:** Epilimnetic (upper water layer) phosphorus levels were within a low range and were less than the NH state median value. Hypolimnetic (lower water layer) phosphorus levels were slightly elevated in early August and turbidity was also slightly elevated. Heavy winds may have led to bottom sediment disturbance from the anchor pulling and sediment could have contributed to elevated phosphorus. Smith Inlet phosphorus was greatly elevated on both sampling events in August. Field data note historical logging activity in the tributary sub-watershed as well as high color content from tannic and humic acids indicating water rich in organic content.
- **TRANSPARENCY:** Transparency (water clarity) was lower in early August due to wind and wave action and was much better in late August during calm conditions. Average transparency was better than the state median. Transparency measured with the viewscope was much better than transparency measured without the viewscope and may better represent actual conditions.
- **TURBIDITY:** Epilimnetic turbidity was low on each sampling event. Hypolimnetic turbidity was slightly elevated in early August potentially due to heavy winds dragging anchor and disturbing bottom sediment. Smith Inlet turbidity was elevated on both sampling events likely due to the high color content of the samples.
- **PH:** Deep spot pH levels were less than desirable range 6.5 – 8.0 units. Smith Inlet pH levels were very low due to the high content of tannic and humic acids.
- **RECOMMENDED ACTIONS:** Overall, pond water quality was good in August. Continue monitoring to establish a baseline data set to evaluate seasonal water quality and historical trends. Smith Inlet phosphorus levels were concerning as they may lead to an increase in aquatic plant and algel in the pond over time. Contact the VLAP Coordinator in the spring to schedule a biologist visit in early summer. Keep up the great work!



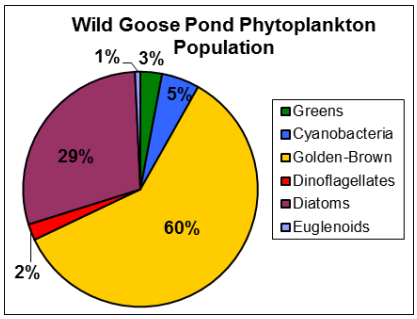


Table 1. 2013 Average Water Quality Data for WILD GOOSE POND

Station	Alk.	Chlor-a	Chloride	Cond.	Total P	Trans.		Turb.	pH
	mg/l	ug/l	mg/l	uS/cm	ug/l	m		ntu	
						NVS	VS		
Epilimnion	2.25	2.69	3	26.2	7	3.88	4.88	0.56	6.31
Hypolimnion				35.0	9			2.33	6.22
Smith Inlet				29.6	137			9.53	4.81

NH Median Values: Median values for specific parameters generated from historic lake monitoring data.
Alkalinity: 4.9 mg/L
Chlorophyll-a: 4.58 mg/m^3
Conductivity: 40.0 uS/cm
Chloride: 4 mg/L
Total Phosphorus: 12 ug/L
Transparency: 3.2 m
pH: 6.6

NH Water Quality Standards: Numeric criteria for specific parameters. Results exceeding criteria are considered a water quality violation.
Chloride: < 230 mg/L (chronic)
E. coli: > 88 cts/100 mL – public beach
E. coli: > 406 cts/100 mL – surface waters
Turbidity: > 10 NTU above natural level
pH: 6.5-8.0 (unless naturally occurring)

HISTORICAL WATER QUALITY TREND ANALYSIS

Parameter	Trend	Explanation	Parameter	Trend	Explanation
pH	N/A	Ten consecutive years of data necessary.	Chlorophyll-a	N/A	Ten consecutive years of data necessary.
Conductivity	N/A	Ten consecutive years of data necessary.	Transparency	N/A	Ten consecutive years of data necessary.
			Phosphorus (epilimnion)	N/A	Ten consecutive years of data necessary.